

## Practice Exercise 1

1. Write a program in Python to print out the number of seconds in a 30-day month.
2. Write a program in Python to print out the number of seconds in a year.
3. Use Python as a calculator. The operations are just the same as what we are used to in mathematics.
4. A high-speed train can travel at an average speed of 150 mph. How long will it take a train travelling at this speed to travel from London to Glasgow which is 414 miles away? Give your answer in minutes.



5. Using the help facility on Python. Type help() to start the online facility, then "keywords" to view the keywords that are available in Python. Get help on the "if" keyword.
6. Use the interpreter to execute the following:
  - a. 49 / 7
  - b. 8\*\*2
  - c. 20%3
  - d. 17 // 3
  - e. 7\*\*3

7. Use Python to evaluate the following:
  - a. If you are going on holiday to France how many Euros would you get when you convert £500 at an exchange rate of £1 = €1.20.



- b. On return from your holiday, you now have €320. How many GBP would you receive at an exchange rate of £1 = €1.32. Use Python to calculate this.



8. The volume of a sphere is given by  $V = \frac{4}{3}\pi r^3$ . Use Python to find the volume of a sphere with a radius of 10 cm.



9. Insert brackets in the expression 36/9-2 to get:

- a. 2
- b. 5.12



## Practice Exercise 2

1. Write a program that assigns the variables length and width as 18 and 7 respectively. Use the variables to calculate the perimeter and area of the rectangle.

Hint: Perimeter =  $2l + 2w$  and  
Area =  $l \times w$



2. Write a Python program that defines a variable called `days_in_school_each_year` and assign 192 to the variable. The program should then print out the total hours that you spend in school from Year 7 to Year 11, assuming that each day you spend 6 hours in school.

3. What value will be printed on the screen?

```
marks = 25
marks = marks + 10
print(marks)
```



4. Given the code below, what value will be printed to the screen?

```
time_spent = 34 # in minutes
# after one minutes
time_spent = time_spent + 1
print(time_spent)
```

Hint: We use `#` to include comments in our code. Comments are ignored by the interpreter; they are meaningless for the interpreter but give more information to us humans. This is particularly important for maintaining the code at a later date.



5. Which of the values below would be printed on the screen from the code snippet?

- a. 5040
- b. 210
- c. 720
- d. Error



```
hours_in_a_week = hours_in_a_day * 7
hours_in_a_month = hours_in_a_week * 30 # assuming we have 30 days in a month
print (hours_in_a_month)
```

6. What is the value of score after running the following code?

```
score = 24
number_of_pieces = 2
new_score = score * 2
```



7. a. True or false? An expression can be assigned to a variable.



- b. What is the value of y after running the code?

```
x, y = 23, 45
y, x = x, y
```



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